



02



# STAINLESS STEEL HOSE VITALFLEX®



### JACKETED HOSE

Size : 1/4" to 14"

Working Pressure : 1310 to 21546 kPa

Page 35



### SEISMIC JOINTS

Size : 1/4" to 14"

Working Pressure : 20 to 29523 kPa

Page 36



### METALLIC HOSE - ANNULAR

Size : 1/2" to 14"

Working Pressure : 20 to 29523 kPa

Page 37



### METALLIC HOSE - OMEGA

Size : 1/2" to 20"

Working Pressure : 100 to 10000 kPa

Page 38



### METALLIC HOSE - HIGH PRESSURE

Size : 1/4" to 6"

Working Pressure : 35 to 28283 kPa

Page 39



### METALLIC HOSE - ULTRA HIGH PRESSURE

Size : 1/4" to 2"

Working Pressure : 103 to 30378 kPa

Page 40



### METALLIC HOSE - EXTREME HIGH PRESSURE

Size : 3" to 4"

Working Pressure : 8618 kPa

Page 41



### METALLIC HOSE - MONEL

Size : 1/4" to 3"

Working Pressure : 2164 to 20753 kPa

Page 42



### PUMP CONNECTERS - M/S TABLE 'E'

Size : 2" to 8"

Working Pressure : 1201 to 2501 kPa

Page 43



### PUMP CONNECTERS - 304 S/S BSPT MALE

Size : 3/4" to 2"

Working Pressure : 2501 to 5003 kPa

Page 44



### BITUMEN HOSE - CONVOLUTED

Size : 2 1/2"

Working Pressure : 4002 kPa

Page 45



### BITUMEN HOSE - INTERLOCKED

Size : 2 1/2"

Working Pressure : 2400 kPa

Page 46

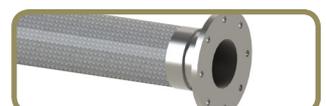


### TTMA DROP HOSE

Size : 3" to 4"

Working Pressure : 2501 to 3202 kPa

Page 47



### ENCAPSULATED PTFE SS1 METALIC HOSE

Size : 1/2" to 6"

Working Pressure : 1200 to 6500 kPa

Page 48



### STRIPWOUND HOSE

Size : 3/4" to 12"

Profile : Convolutated

Page 49



### Introduction

The VITALFLEX® range is especially designed to achieve several objectives in pipe work design. These include, absorption or vibration, operate under vacuum, handle temperature extremes, suppress rigid pipe noise transmitted, accommodate reciprocating and flexing movement, operate effectively under high pressures and adjust or correct for misalignment.

VITALFLEX® hose is a general purpose industrial hose and is available in different grades of stainless steel including 304, 316, 321, Monel & Inconel.



### Convolutd Hose Design

The corrugated hose is manufactured from a cylindrical, thin walled tube formed from rolled strip and welded at the seam. Impressed into this tube is a corrugated annular profile. Annular corrugation means each convolution is perpendicular to the centre line of the hose giving a distinct advantage of movement with each corrugation being relatively independent of movement from each other. When the corrugations are closely spaced, the hose is referred to as 'closed pitch' hose. Conversely, when the corrugations are more widely spaced, the hose is referred to as 'open pitch'.

**Metallic** – Excellence in liquid and gas transfer applications

### Temperature

Contingent upon the extremes of temperature; hot or cold metal is a positive choice as it can withstand temperature extremes.

### Chemicals

Metal hose is an excellent option as it effectively controls exposure to a wide range of chemicals – both internal and external.

### Permeation

Metal hose is not subject to permeation whereas non metal hose can allow permeation through the hose wall material. Pacific Hoseflex has Australian Gas Approved (AGA) certified hose to assure customers of compliance.

### Failure

Generally speaking, metal hoses do not disintegrate rapidly causing any major failure. Warning signs are evident that leaks are present and the medium escapes gradually. Non-metallic hoses can be prone to sudden failure.

### External Abrasion and Over bending

A range of options exist to prevent these occurrences; including external braid, spring guards, rubber and PVC covers and protective sleeves.

### Heat and fire

Our metal hoses maintain form and structure up to 700°C

### Fittings / Flanges

We can adapt virtually any fittings and flanges to a metal hose - other hose products require special and significant variances. We specialize in providing flexible options. Certified Welding methods:

- AS4041:2006 Class 1
- ASME B31.3: 2008
- ASME IX:2010
- AS/NZS 3992:1998
- ASME BPVC.IX: 2015 & AS/NZS 1554.1:2014 SP





The VITALFLEX® hose in externally pressurized system (under vacuum).

When a corrugated metal hose is considered to be used in a system which is externally pressurized or under vacuum conditions (i.e. vacuum pumps), the question as to how the hose will behave under “full vacuum” or “perfect vacuum” is often asked.

The definition of vacuum is used to describe any pressure that is lower than standard atmospheric pressure. The most widely accepted unit of vacuum measurement is the Torr (after an Italian scientist Torricelli). So one standard atmospheric pressure can be expressed (in the units more commonly used within our community) as the following:

$$1 \text{ atmosphere} = 760 \text{ Torr} = 14.7 \text{ PSI}$$

According to Columbia Encyclopedia: “a perfect vacuum has never been obtained..” and therefore expressions “full vacuum” or “perfect vacuum” are used loosely to express conditions with near “0” pressure. Take a look at the table below to compare different “vacuum conditions”:

	Pressure (Torr)	Pressure (PSI)
Vacuum Cleaner	600	11.60
Liquid Ring Vacuum Pump	24	0.46
Rotary Vane Pump	1 to 0.01	0.02 to 0.0002
Near Earth Outer Space	0.00001	0.000000002

Corrugated hose can be used under vacuum conditions and will not be overstressed under such condition, provided the hose section is adequately braced against buckling. The design approach is similar to that for internally pressurized system keeping in mind that external air pressure causes the hose to contract inwardly (rather than expand axially). The proper design though, requires evaluation of the system as a whole (not just one segment – such as corrugated hose – at a time).

- 10
- 9
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### Flexibility

The flexibility of the VITALFLEX® hose is the result of the bending of the metal corrugations. Service life varies depending upon the severity of the flexing, temperature, corrosive conditions, pressure and vibration to which the hose is subjected.

Unless restrained, corrugated hose will elongate when subjected to increased internal pressure. Restraint is provided by a braided covering, consisting of a tubular sheath of woven metal wires fitted tightly over the corrugated hose and secured at each end. Bending and flexibility of the corrugated hose is not appreciably affected by the wire braid covering.



### Tolerances

The nominal length refers to the hose complete with end fittings and indicates the total length. Unless otherwise arranged when ordering, the following length tolerances must be taken into account when checking the nominal length:

Dimensions in mm

Nominal Lengths	up to 500		over 500 up to 1000		over 1000 up to 2000	
	Min.	Max.	Min.	Max.	Min.	Max.
ISO 10380:2012	495	515	990	1030	1980	2060

- The "End to End" or "Seat to Seat" length of a hose assembly shall be the length as ordered to a tolerance of +3% / -1
- Smaller length tolerances are possible, but must be specially agreed when ordering.

### Braid (ISO 10380)

Unbraided hose (SS0) is satisfactory for vacuum and low pressure applications and for protection against vermin and abrasion.

Stainless steel wire braid (SS1-V) on the hose assembly provides the hose with a higher internal pressure capability by acting as a restraint against hose elongation, and acts to dampen vibration without significant loss of flexibility.

A second layer of braid (SS2) may be used to increase pressure rating. The test pressure is not to be exceeded or it may incur permanent corrugation deformation.

A third layer of braid (SS3) used to increase pressure rating from SS2.



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1

STAINLESS STEEL HOSE

### Flow Velocity Consideration

The flow velocity in corrugated metal hose should never exceed 150 ft/sec for gas, or 75 ft/sec for liquids. When the hose is installed in a bent condition, these flow values should be reduced proportionally to the degree of the bend. Where the flow velocity exceeds these rates, an interlocked metal hose liner is recommended. *Refer to Nomograph Page 364*

### Service Life

The VITALFLEX® is engineered to provide maximum service life when properly installed. Incorrect installation, incorrect flexing or careless handling in an application will reduce the effective service life of the hose and cause premature failure of an assembly. The service life can be affected by many external factors, the environment surrounding the assembly as well as the media being transferred will together determine a general guide to the service life.



### Non Destructive Pressure Testing

The nominal pressure rating of a VITALFLEX® can vary according to type, material and size. The pressure can be affected by factors such as temperature, pulsation or shock conditions and bending stresses. To avoid distortion of the convolutions of the hose, the maximum test pressure quoted in the literature must not be exceeded. If requested all hoses can be tested to 1½ times the customers stated working pressure, provided that this does not exceed the stated maximum test pressure.

### Applicable Standards

If required your hoses can be manufactured for use with gas and water.

Corrugated Metal Hoses: ISO 10380:2012

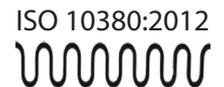
AGA Approved: AS 4631:2005 (upon request)

Watermark Approved: WMTS 520:2016 (upon request)

Welding Compliant: AS 4041- Class 1 (upon request)

Seismic Rated: AS 1170:2007 (upon request)

Fire Protection Systems (upon request)



#### Annular



#### Omega



#### High Pressure



#### Monel



### Covers

To protect the VITALFLEX® from unusual external abuse you can use different armours and covers such as: stainless steel interlock, heat shrink, lay-flat, scuff guarding, fire sleeve, fibre glass tape, PVC, rubber, wire spring-guard and rope lag cover. Refer to Cover Section Page 297 for more information

#### Silicone Coated Fibreglass Sleeve

Size : 6mm to 130mm  
Material : Silicone



#### PVC Covering

Size : 1.6mm to 125.0mm  
Material : Polyolefin



#### Wire Spring Guard

Size : 20mm to 100mm  
Material : 316/304 Stainless Steel, Galvanised



#### Rope Lag

Size : 6mm to 48mm  
Material : Sisal Rope



#### Wire Bend Restrictor

Size : 20mm to 100mm  
Material : 316/304 Stainless Steel, Galvanised



#### Hose Floats

Size : 10mm - 130mm Hose O.D.  
Material : Polyethylene



#### Pigstail

Size : 7mm to 99mm I.D.  
Material : HPDE (High Density Polyethylene)



#### Bird & Rodent Proofing Briad

Size : 6mm to 150mm  
Material : 316/304 Stainless Steel



#### Whipsock

Size : 14mm to 180mm  
Material : 316/304 Stainless Steel, Galvanised



#### Rawhide

Size : 22.9mm to 93.0mm  
Material : Nylon



#### Stainless Steel Interlock Cover

Size : 3/4" - 12"  
Material : 304 Stainless Steel



#### Ball Joint Armor

Size : 1" - 6"  
Material : Stainless Steel, Galvanised



#### Layflat

Size : 20mm to 200mm I.D.  
Material : PVC with low pressure stability



#### Hose Handling Sling

Size : 4" - 12" Hose Dia.  
Material : 100% nylon webbing



### Liners

The most common liner used in a VITALFLEX® is a metal interlock hose. The liner will allow a smooth flow rate whilst maintaining limited flexibility. The interlock will partially reduce the bend radius and inside diameter of the corrugated hose. The smooth liners reduce associated noise. Another alternative liner is braid which doesn't reduce the bend radius of the hose.

#### Interlock Liner



#### Braid Liner



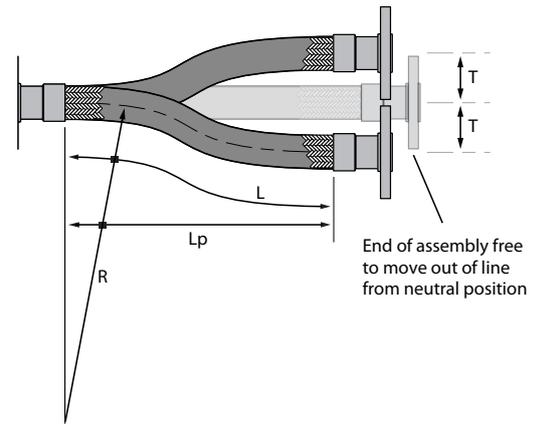
### Minimum Bend Radius Occurs at Offset Position

The moving end is free to move "out of line" from neutral position.

To find the live hose length:

$$L = \sqrt{6(RT) + T^2}$$

$$L_p = \sqrt{L^2 - T^2}$$



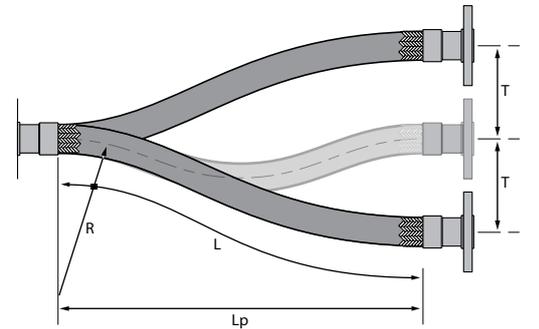
### Minimum Bend Radius Occurs at In Line Position

The moving end of the hose is restricted to move only up and down in line as the hose crosses neutral position.

To find the live hose length:

$$L = \sqrt{20(RT)}$$

$$L_p = \sqrt{L^2 - T^2}$$

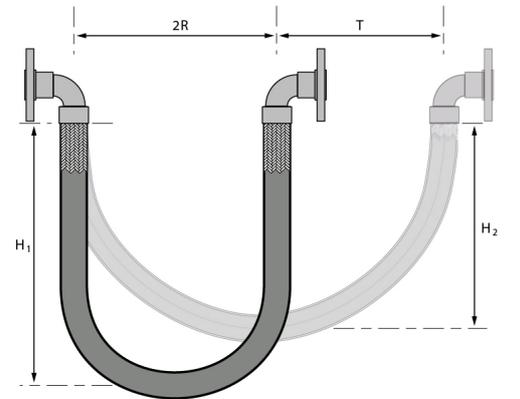


### Horizontal Movable Pipe System

$$L = 4R + 1.57T$$

$$H_1 = 1.43R + 0.79T$$

$$H_2 = 1.43R + 0.5T$$



### Vertical Movable Pipe System

$$L = 4R + \frac{T}{2}$$

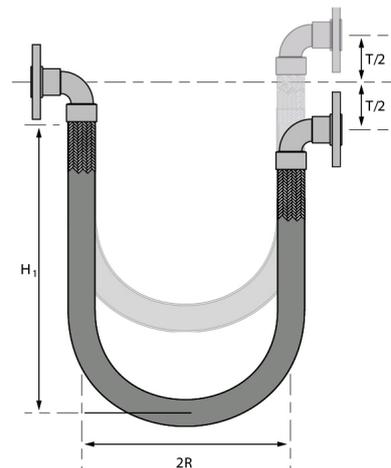
$$H_1 = 1.43R + \frac{T}{2}$$

L = Live Hose Length (mm)

R = Minimum Dynamic Bend Radius for Constant Flexing (mm)

T = Total Travel (mm)

H1 = Hang Length of the Loop (mm)



### Prior to Installation

1. Examine the hose for any obvious damage. IF THE HOSE IS DAMAGED, DO NOT USE. Examples of damage may include slices to the cover, kinks, broken braid, and crushing of the hose (can reduce life and pressure rating).
2. Review application to ensure proper selection of hose has been made by examining materials, pressures, chemical compatibility, temperature and environment.
3. Hose movement should be restricted to a SINGLE PLANE (Drawing A) to minimize the resultant twisting (torque). Note: The flexing plane should also be the plane in which the bending occurs. Excessive bending will induce stress fatigue (Drawing B).
4. Axial movement should be eliminated. The hose should not be stretched or compressed along its longitudinal axis when installed in-line (Drawing C).

### Installation

Never use hose below minimum bend radius (Drawing D). Bend radius (measured to inside radius of fluoropolymer-lined hose and centre line for the VITALFLEX®) are given for individual products and sizes (consult factory for specific data). These values represent the minimum bend radius with which the hose can be properly installed. If these values are not maintained, the hose can fail prematurely.

Note: In some cases, vacuum and pressure ratings are based on not exceeding 2% minimum bend radius (consult factory for specific hose ratings).

Do not allow severe bends (Drawing E). Severe bends can cause kinking in a hose or overstress the assembly/material, resulting in damage and ultimate failure. If severe bends cannot be avoided, use elbows designed to accommodate the direction change.

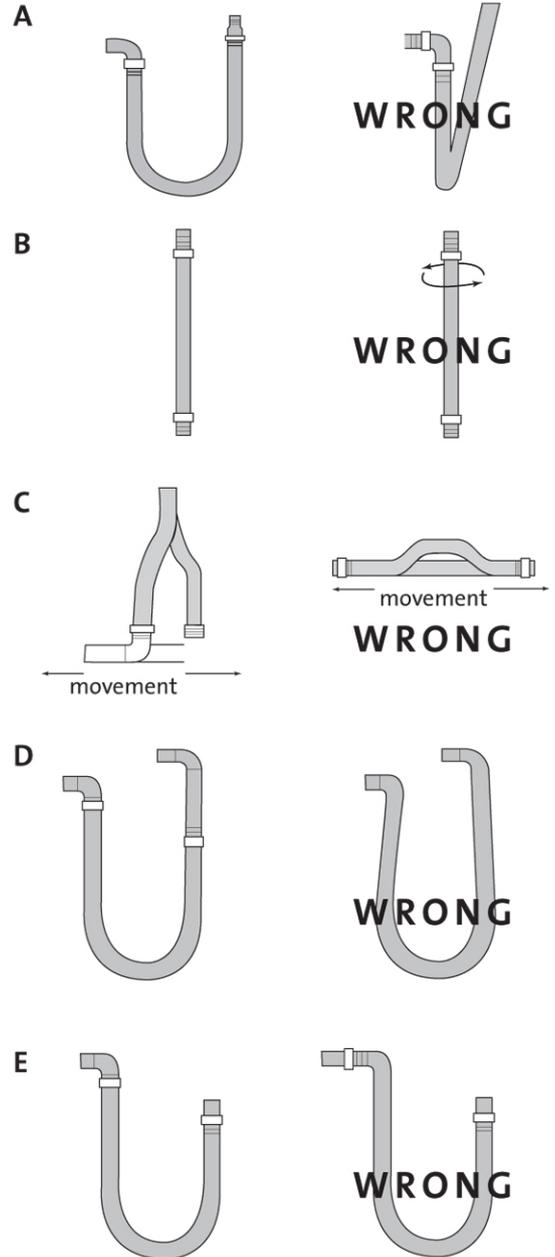
Do not twist (torque) assembly along centre line during installation. The likelihood of leakage/failure increases for hoses that are twisted (torqued) during assembly. The proper use of floating flanges and swivel-type fittings (i.e., JIC) can eliminate improper twisting.

### Nominal Hose Size

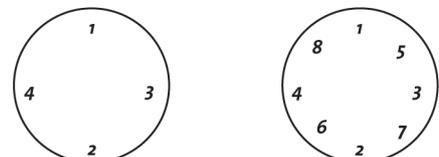
1/2"	1"	1 1/2"	2"	3"	4"	5"	6"
10	10	15	25	40	30	60	75

Torque (ft.-lbs.)

- For accurate tightening a torque wrench is HIGHLY recommended. If a flange leak occurs on one side of a properly torqued flange, the bolts should not be over-torqued. Instead loosen the bolts on the non-leaking side the same amount you tighten the bolts on the leaking side.



### Bolt Torque Sequence



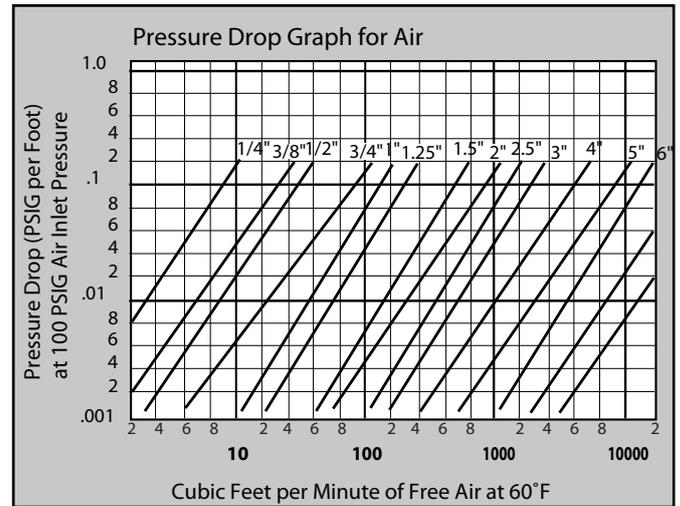
When gas or liquid being conveyed in a VITALFLEX® exceeds certain limits, resonant vibration can occur. Resonance may cause very rapid failure of the assembly. In those applications where product velocities exceed the limits shown in the graph below, a revision of the assembly design might include:

- 1) Addition of an interlocked metal hose liner.
- 2) An increase in the corrugated hose I.D.
- 3) A combination of the above.

### Pressure Drop

Pressure drop in a piping system is often a concern of the designer. Compared to rigid pipe, there is always a greater pressure drop in corrugated metal hose. The following graphics are offered as aids in estimating pressure drop in corrugated hose conveying water and air. The values derived are approximate and apply only to straight line installations. Bends and fittings in the hose assembly can increase the pressure drop.

For a rough estimate, it can be assumed that the pressure loss in corrugated hoses in the turbulence zone is around 150% higher than in new welded steel pipes. I.e. the diameter of a corrugated hose would have to be increased by 20% to equal the pressure loss of steel pipe. In the high-velocity zone, corrugated hoses are around 450% higher due to the marked vortex activities; in this case, a diameter increase of 41% would be necessary.



For air inlet pressures other than 100 psig:  

$$PD = PD @ 100 \text{ psig} \left( \frac{100 + 14.7}{P + 14.7} \right)$$

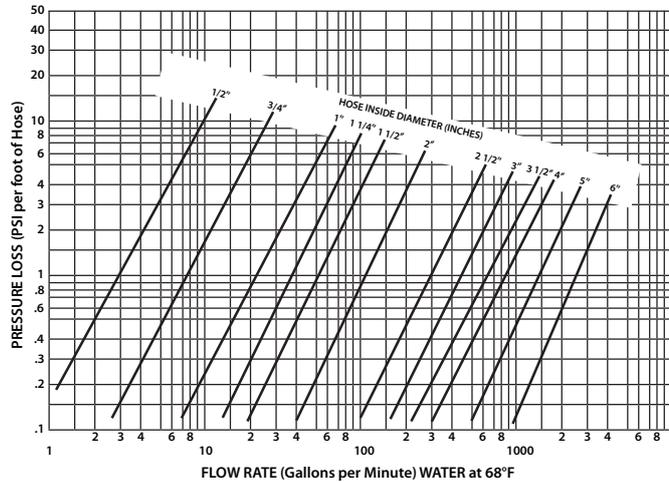


### Water Pressure loss

VITALFLEX® hoses are used for conveying of substances of different consistency (gaseous, liquid or solid). One of the important factors to consider in designing systems that implement metal hoses, is the loss of pressure. Due to its profile the pressure loss in corrugated hoses is significantly higher than in steel pipes – almost 100%, and about 20% to 25% higher for the stripwound hoses.

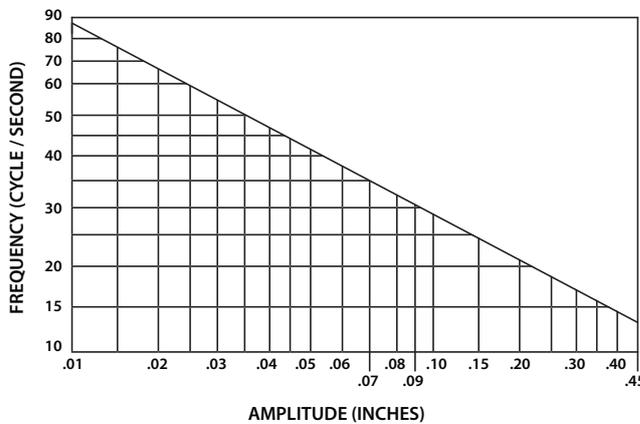
To find out pressure loss over a certain length of hose we can use Pressure Loss graph below – for example: we need to calculate the pressure loss in 85 feet long 2” Corrugated Hose (which transfers water) with Flow Rate been 1400 cubic feet per hour. By using calculator below we find that 1400 ft<sup>3</sup>/hour. corresponds to 175 gal/min. Then we plot the 175 gpm on the X-axis of the chart below until we “hit” the line for 2” hose ID, then by going over horizontally to the Y-axis, we find that Pressure Loss per foot of hose will be about 3.7 psi. So that the total pressure drop over the hose length will be 314.5 psi (3.7 x 85).

Keep in mind that if you transfer gaseous substance through the hose then you need to find the ratio of the density of gas over the density of water and adjust the pressure drop respectively. For example if you transfer natural gas (density = 0.050 lb/ft<sup>3</sup>) and knowing that water density = 62.4 lb/ft<sup>3</sup> we can find out the pressure drop as the following: 3.7 x (0.050/62.4) = 0.0030 psi/ft or 0.255 psi for entire length of hose (85 x 0.003).



### Vibration information and graph

The inherent flexibility of corrugated hose plus the dampening effect of the wire braid combine to create the excellent vibration isolation qualities of corrugated metal hose. The graph below defines the combination of amplitudes and frequencies considered to be normal industrial vibration.



### Jacketed Hose

A jacketed assembly consists of a “hose within a hose.” An inner or primary media conveying hose is enclosed or jacketed by a larger diameter hose. The hoses are joined at each end by specially designed fittings so that there is no media pathway between the two hoses.

Jacketed assemblies are often specified when the primary media must be kept at either an elevated or cryogenic temperature. Steam is often circulated through the jacket hose to keep a viscous material in the inner hose hot and easily conveyed. A vacuum can also be pulled on the jacket hose to insulate cryogenic liquids being conveyed in the inner hose.

The media typically is steam, hot oil or hot water to raise the temperature of the fluid moved in the internal hose. Also cold products such as liquid helium or nitrogen can be used to lower the temperature of the fluid with-in the internal hose.



### Following Applications:

- Heated processes
- Rail car and tank truck loading/unloading
- Marine Transfer
- Flexible connections to vibrating equipment
- To relieve pump housing stresses
- Hazardous material piping system using an alarmed vacuum jacket
- Vacuum jacketed hoses for heat insulation or as safety barrier for toxic processes

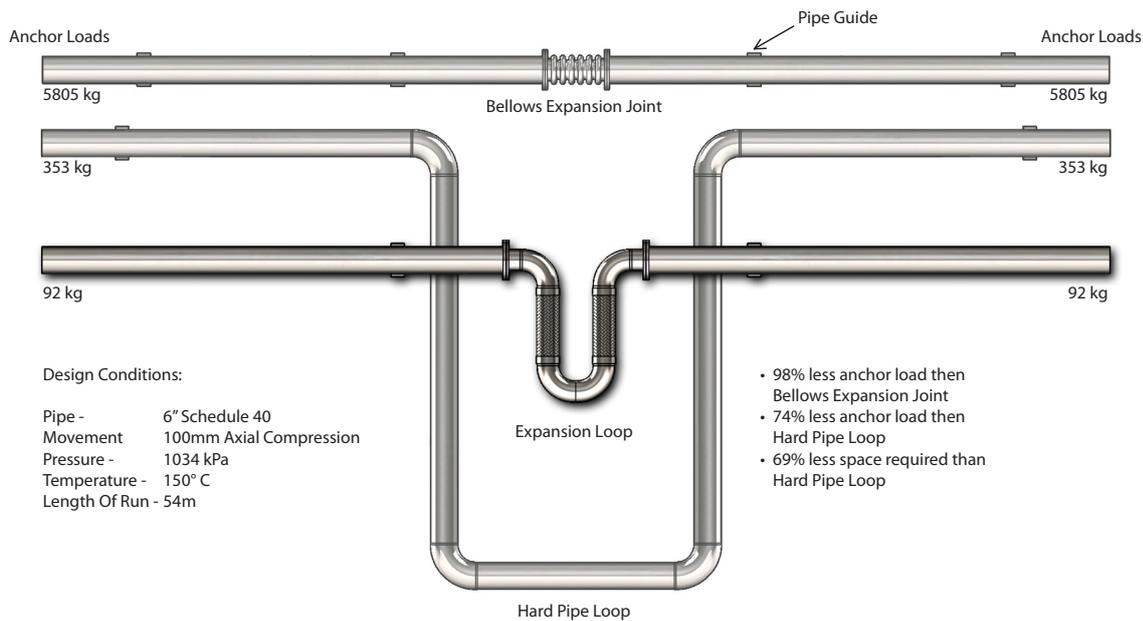


### Seismic Joints and Expansion Loops

Model name: VITALFLEX-V and VITALFLEX-U

VITALFLEX® seismic joints and expansion loops are engineered to account for the cumulative movement(s) in piping systems. The VITALFLEX® joint have been designed to counter thermal expansion/contraction, offset and rotation.

Piping used in locations subject to seismic conditions have their own set of unexpected random movements. The random motion common to earthquakes, requires that seismic expansion joints be capable of movement in any direction and are able to withstand the acceleration forces.



Significant cost and safety benefits found in Pacific Hoseflex seismic expansion joints.

- It is an inexpensive alternative to dual-tied bellows expansion joints and ball joints  
Corrugated Metal Hoses: ISO 10380:2012
- During an earthquake, it protects equipment by allowing boilers, chillers, fan-coil units and other systems to move independently from buildings such as hospitals, high rises and stadiums  
Seismic Rated: AS 1170:2007 (upon request)
- Installation at the connection point, prevents nozzles from cracking or shearing off
- A break in the gas pipe work could start a fire and cause vast damage to the entire building. This Australian Gas Approval (AGA) certified seismic expansion joint will compensate for the movement that occurs during any seismic activity such as an earthquake  
AGA Approved: AS 4631:2005 (upon request)
- Designed for potable water applications the VITALFLEX® joint can be Watermark certified in accordance with WMTS 520:2016



See Expansion Joint catalogue for data sheets. Page 88

### VITALFLEX® - Annular



**Part No.:** SS0-A Tube Only / SS1-A Tube and Single Braid / SS2-A Tube and Double Braid

**Construction:** Annular / Close Pitch

**Tube Available:** 304 / 316 Stainless Steel

**Braid Available:** 304 / 316 Stainless Steel

**Size Available:** 1/4" - 14"

**Max Temp:** -276°C to 700°C

Low | Med | High

Flexibility

Cycle Life

Pressure Rating

Chemical Resistance

Wall Thickness

### Construction



#### Applicable Standards:

Corrugated Metal Hoses: ISO 10380:2012

AGA Approved: AS 4631:2005 (upon request)

Watermark Approved: WMTS 520:2016 (upon request)

Welding Compliant: AS 4041- Class 1 (upon request)

Seismic Rated: AS 1170:2007 (upon request)

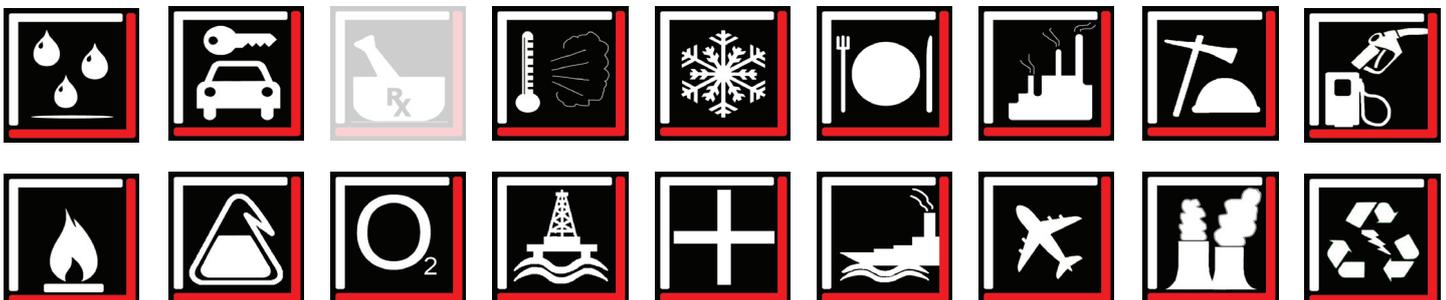
Fire Protection Systems (upon request)

#### Temperature Correction Factor ISO 10380 (316L)

-200	-150	-100	-50	0	20	50	100	150	200	250	300	350	400	450	500	550	600	650	700
1.0	1.0	1.0	1.0	1.0	1.0	0.93	0.83	0.72	0.66	0.62	0.59	0.56	0.55	0.53	0.51	0.50	0.50	0.19	0.1

Nominal Dia.		Outside Dia. (mm)			Weight (Kg/m)			Min. Bend Radius(mm)		Working Pressure (kPa)			Burst Pressure (kPa)		
mm	inch	SS0	SS1	SS2	SS0	SS1	SS2	Static	Dynamic	SS0	SS1	SS2	SS0	SS1	SS2
6	1/4"	9.60	10.80	12.10	0.13	0.25	0.39	28	80	496	16270	19523	1985	65079	78095
10	3/8"	14.50	15.50	16.70	0.19	0.37	0.53	38	129	496	11299	13560	1985	45197	54242
12	1/2"	16.70	18.00	19.72	0.34	0.50	0.68	45	139	496	8445	10134	1985	33780	40536
20	3/4"	26.70	28.00	29.20	0.58	0.88	1.18	67	167	296	7128	8555	1186	28513	34221
25	1"	32.20	33.70	34.90	0.79	1.12	1.46	84	190	296	5487	6583	1186	21950	26335
32	1 1/4"	41.20	42.60	43.80	1.13	1.60	2.05	105	260	296	4136	4963	1186	16545	19854
40	1 1/2"	49.50	50.90	52.10	1.25	1.84	2.43	130	298	193	3840	4605	772	15359	18420
50	2"	60.30	61.70	62.90	1.34	2.27	3.20	160	318	193	3930	4715	772	15718	18862
65	2 1/2"	84.00	85.30	88.30	1.76	2.78	3.83	203	500	100	2826	4521	400	11307	18084
80	3"	98.00	100.30	102.30	1.81	2.99	4.19	229	558	90	2310	3696	400	9240	14784
100	4"	124.00	126.30	128.30	2.52	4.01	5.50	330	685	80	1654	2646	320	6618	10584
125	5"	153.00	155.30	157.30	3.74	5.61	7.03	457	787	41	1316	2110	164	5264	8440
150	6"	178.00	180.30	182.30	5.19	7.11	9.04	482	914	34	1137	1820	136	4550	7280
200	8"	232.00	234.30	236.70	8.31	14.13	19.99	508	1016	41	1643	2578	164	6440	10307
250	10"	283.97	287.52	290.83	10.17	19.30	28.44	635	1270	35	1585	2530	140	6329	10128
300	12"	335.64	339.39	342.90	13.50	22.19	30.89	762	1524	20	1110	1771	80	4433	7094
350	14"	373.37	376.93	380.49	21.10	32.48	43.85	889	1778	20	820	1310	80	3282	5240

### Applications



1 2 3 4 5 6 7 8 9 10

STAINLESS STEEL HOSE

### VITALFLEX® - Omega



**Part No.:** SS0-O Tube Only / SS1-O Tube and Single Braid / SS2-O Tube and Double Braid

**Construction:** Omega / Close Pitch

**Tube Available:** 304 / 316 Stainless Steel

**Braid Available:** 304 / 316 Stainless Steel

**Size Available:** 1/2" - 20"

(Larger sizes upon Request)

**Max Temp:** -276°C to 700°C

Low | Med | High

Flexibility

Cycle Life

Pressure Rating

Chemical Resistance

Wall Thickness

### Construction



**Applicable Standards:**

Corrugated Metal Hoses: ISO 10380:2012

AGA Approved: AS 4631:2005 (upon request)

Watermark Approved: WMTS 520:2016 (upon request)

Welding Compliant: AS 4041- Class 1 (upon request)

Seismic Rated: AS 1170:2007 (upon request)

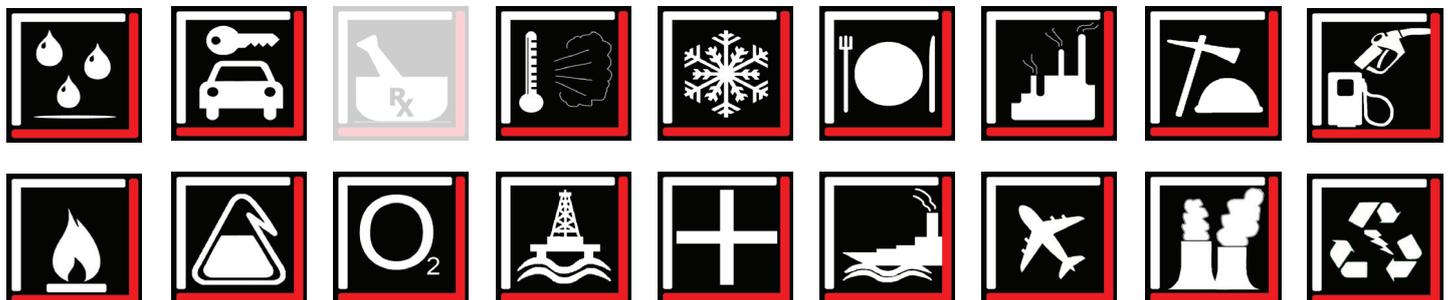
Fire Protection Systems (upon request)

#### Temperature Correction Factor

-200	-150	-100	-50	0	20	50	100	150	200	250	300	350	400	450	500	550	600	650	700
1.0	1.0	1.0	1.0	1.0	1.0	0.93	0.83	0.72	0.66	0.62	0.59	0.56	0.55	0.53	0.51	0.50	0.50	0.19	0.1

Nominal Dia.		Outside Dia. (mm)				Weight (Kg/m)				Min. Bend Radius (mm)		Working Pressure (kPa)			Burst Pressure (kPa)		
mm	inch	SS0	SS1	SS2	SS3	SS0	SS1	SS2	SS3	Static	Dynamic	SS0	SS1	SS2	SS0	SS1	SS2
20	3/4"	28	30	32	34	0.35	0.60	0.85	1.10	100	180	400	6300	10000	1600	25200	40000
25	1"	35	37	39	41	0.47	0.85	1.23	1.61	120	280	400	6300	10000	1600	25200	40000
32	1 1/4"	43	45	47	49	0.51	0.96	1.41	1.86	140	340	300	4000	6300	1200	16000	25200
40	1 1/2"	51	53	55	57	0.70	1.18	1.66	2.14	180	450	300	4000	6300	1200	16000	25200
50	2"	62	64	66	68	0.85	1.75	2.65	3.55	220	550	300	2500	4000	1200	10000	16000
65	2 1/2"	79	82	85	87	1.41	2.70	3.99	5.28	280	650	200	2500	4000	800	6400	10000
80	3"	97	100	103	106	1.62	3.12	4.62	6.12	350	800	200	2500	4000	800	6400	10000
100	4"	122	125	128	131	2.00	3.70	5.40	7.10	400	1000	200	1600	2500	800	6400	10000
125	5"	151	155	159	163	2.80	5.00	7.20	9.40	500	1200	200	1600	2500	800	6400	10000
150	6"	180	184	188	192	3.80	6.60	9.40	12.20	600	1500	200	1600	2500	800	6400	10000
200	8"	240	245	250	255	6.70	12.00	17.30	22.60	800	2000	200	1200	2000	800	4000	6400
250	10"	298	303	308	313	10.6	18.10	25.60	33.10	1000	2200	200	1000	1600	800	4000	6400
300	12"	360	365	370	375	17.10	31.40	45.70	60.00	1200	2500	200	1000	1600	800	4000	6400
350	14"	410	415	420	425	20.00	36.30	52.60	68.90	1400	3000	200	800	1280	800	4000	6400
400	16"	460	465	470	475	22.80	41.10	59.40	77.70	1600	3500	200	600	1000	800	4000	6400
450	18"	500	502	504	506	-	-	-	-	2250	4500	100	500	800	800	4000	6400
500	20"	575	577	579	581	-	-	-	-	2500	5000	100	500	800	800	4000	6400

### Applications



1 2 3 4 5 6 7 8 9 10 STAINLESS STEEL HOSE

### VITALFLEX® - High Pressure



**Part No.:** SS0-HP Tube Only / SS1-HP Tube and Single Braid / SS2-HP Tube and Double Braid  
**Construction:** Annular / Close Pitch / Heavy Wall  
**Tube Available:** 304 / 316 / 321 Stainless Steel  
**Braid Available:** 304 / 316 Stainless Steel  
**Size Available:** 1/4" - 6"  
**Max Temp:** -276°C to 700°C

Low | Med | High

Flexibility

Cycle Life

Pressure Rating

Chemical Resistance

Wall Thickness

#### Construction



#### Applicable Standards:

Corrugated Metal Hoses: ISO 10380:2012  
 AGA Approved: AS 4631:2005 (upon request)  
 Watermark Approved: WMTS 520:2016 (upon request)

Welding Compliant: AS 4041- Class 1 (upon request)  
 Seismic Rated: AS 1170:2007 (upon request)  
 Fire Protection Systems (upon request)

#### Temperature Correction Factor

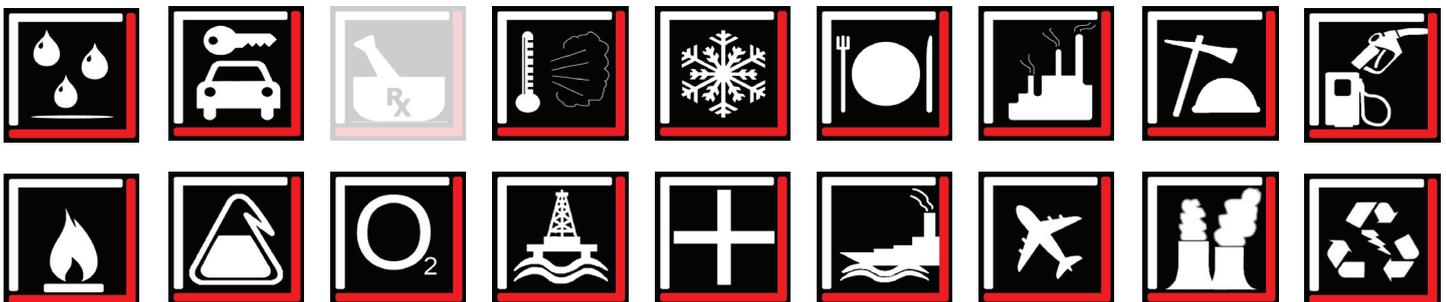
-200	-150	-100	-50	0	20	50	100	150	200	250	300	350	400	450	500	550	600	650	700
1.0	1.0	1.0	1.0	1.0	1.0	0.93	0.83	0.72	0.66	0.62	0.59	0.56	0.55	0.53	0.51	0.50	0.50	0.19	0.1

Nominal Dia.		Outside Dia. (mm)			Weight (Kg/m)			Min. Bend Radius (mm)		Working Pressure (kPa)			Burst Pressure (kPa)		
mm	inch	SS0	SS1	SS2	SS0	SS1	SS2	Static	Dynamic	SS0	SS1	SS2	SS0	SS1	SS2
6	1/4"	12.7	14.5	16.3	0.13	0.25	0.39	25.4	127	1242	17678	28283	4968	70712	113132
10	3/8"	17	18.8	20.6	0.19	0.37	0.54	31.8	139.7	690	10357	16567	2760	41428	66268
12	1/2"	20.8	23.4	25.9	0.58	0.94	1.29	38.1	203.2	552	15139	24219	2208	60556	96876
20	3/4"	30.7	33.3	35.8	0.71	1.18	1.64	50.8	203.2	483	9046	14476	1932	36184	57904
25	1"	38.1	40.6	43.2	1.18	1.79	2.40	76.2	228.6	276	7376	11799	1104	29504	47196
32	1 1/4"	47	50	53.3	1.52	2.47	3.42	82.6	254	228	7659	12254	912	30636	49016
40	1 1/2"	55.1	58.4	61.7	2.02	3.14	4.26	82.6	254	138	5989	9577	552	23956	38308
50	2"	63.8	67.1	70.1	2.38	3.81	5.24	136.7	292.1	104	5589	8942	416	22356	35768
65	2 1/2"	82	85.3	88.6	2.98	4.64	4.91	177.8	609.6	69	3988	6383	276	15952	25532
80	3"	96	99.3	102.4	4.42	6.58	8.74	190.5	711.2	69	3726	5962	276	14904	23848
100	4"	122.2	125.2	128.3	4.61	6.77	8.93	508	1016	55	2298	3678	220	9192	14712
150	6"	174.5	180.3	186.2	5.73	9.60	13.47	609.6	2413	35	1835	2933	140	7340	11732

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STAINLESS STEEL HOSE

#### Applications



### VITALFLEX® - Ultra High Pressure



**Part No.:** SS0-UHP Tube Only / SS1-UHP Tube and Single Braid / SS2-UHP Tube and Double Braid

**Construction:** Annular / Close Pitch / Heavy Wall

**Tube Available:** 316 Stainless Steel

**Braid Available:** 304 / 316 Stainless Steel

**Size Available:** 1/4" - 2"

**Max Temp:** -276°C to 700°C

Low | Med | High

Flexibility

Cycle Life

Pressure Rating

Chemical Resistance

Wall Thickness

#### Construction



#### Applicable Standards:

Corrugated Metal Hoses: ISO 10380:2012

AGA Approved: AS 4631:2005 (upon request)

Watermark Approved: WMTS 520:2016 (upon request)

Welding Compliant: AS 4041- Class 1 (upon request)

Seismic Rated: AS 1170:2007 (upon request)

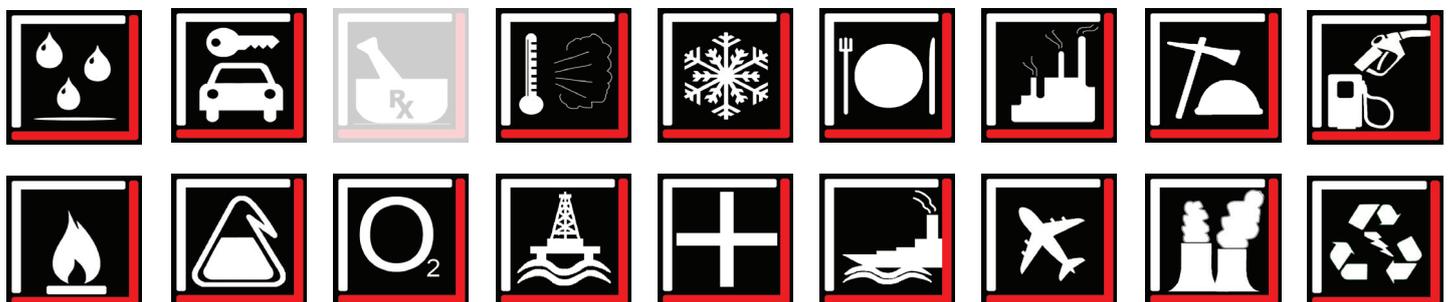
Fire Protection Systems (upon request)

#### Temperature Correction Factor

-200	-150	-100	-50	0	20	50	100	150	200	250	300	350	400	450	500	550	600	650	700
1.0	1.0	1.0	1.0	1.0	1.0	0.93	0.83	0.72	0.66	0.62	0.59	0.56	0.55	0.53	0.51	0.50	0.50	0.19	0.1

Nominal Dia.		Outside Dia. (mm)			Weight (Kg/m)			Min. Bend Radius (mm)		Working Pressure (kPa)			Burst Pressure (kPa)		
mm	inch	SS0	SS1	SS2	SS0	SS1	SS2	Static	Dynamic	SS0	SS1	SS2	SS0	SS1	SS2
6	1/4"	12.7	14.7	16.3	0.30	0.42	0.54	304.8	152.4	1241	18988	30378	4964	75953	121513
10	3/8"	17.0	19.1	21.1	0.46	0.64	0.82	304.8	152.4	689	13245	21188	2758	52979	84750
12	1/2"	20.8	23.4	25.9	0.60	0.86	1.13	355.6	177.8	552	13748	22008	2206	54993	88032
20	3/4"	31.0	34.0	37.1	0.97	1.37	1.77	381	190.5	483	13748	22008	1931	54993	88032
25	1"	38.6	41.9	45.0	1.52	2.20	2.89	406.4	203.2	276	11025	17637	1103	44099	70547
32	1 1/4"	47.0	50.0	53.1	2.32	3.01	3.69	457.2	228.6	172	9080	14527	689	36322	58109
40	1 1/2"	55.6	58.7	61.7	2.99	3.94	4.91	482.6	241.3	138	7322	1107	552	29289	46829
50	2"	63.8	67.1	70.4	3.62	4.72	5.82	609.6	304.8	103	5805	9280	414	23222	37121

#### Applications



### VITALFLEX® - Extreme High Pressure



**Part No.:** SS3-EHP Tube and Triple Braid / SS4-EHP Tube and Quadruple Braid

**Construction:** Annular / Close Pitch / Heavy Wall

**Tube Available:** 316 Stainless Steel

**Braid Available:** 316 Stainless Steel

**Size Available:** 3" - 4"

**Max Temp:** -276°C to 700°C

	Low	Med	High
Flexibility	●	○	○
Cycle Life	○	○	●
Pressure Rating	○	○	●
Chemical Resistance	○	○	●
Wall Thickness	○	○	●

#### Construction



#### Applicable Standards:

Corrugated Metal Hoses: ISO 10380:2012

AGA Approved: AS 4631:2005 (upon request)

Watermark Approved: WMTS 520:2016 (upon request)

Welding Compliant: AS 4041- Class 1 (upon request)

Seismic Rated: AS 1170:2007 (upon request)

Fire Protection Systems (upon request)

#### Temperature Correction Factor

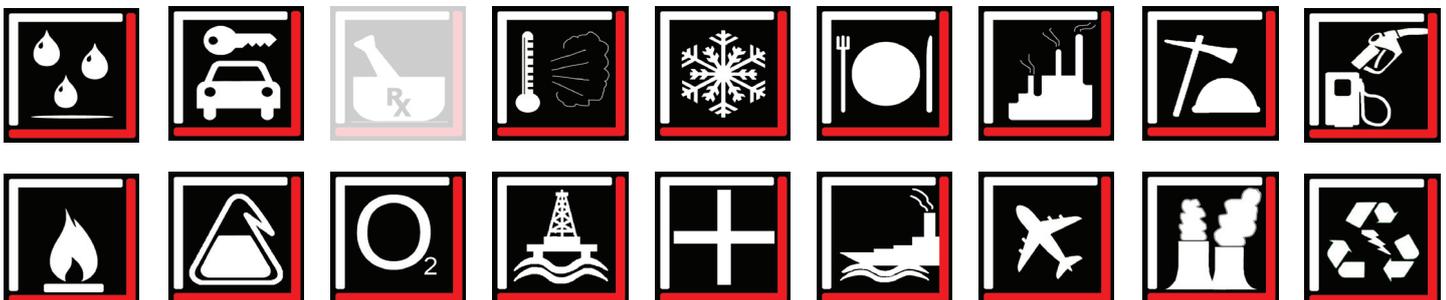
-200	-150	-100	-50	0	20	50	100	150	200	250	300	350	400	450	500	550	600	650	700
1.0	1.0	1.0	1.0	1.0	1.0	0.93	0.83	0.72	0.66	0.62	0.59	0.56	0.55	0.53	0.51	0.50	0.50	0.19	0.1

Nominal Dia.		Braids	Outside Dia.	Weight	Min. Bend Radius (mm)		Working Pressure	Burst Pressure
mm	inch				Static	Dynamic		
80	3"	3	107.2	12.95	2133.6	812.8	8618	34474
100	4"	4	133.9	15.60	2444.8	1320.8	8618	34474

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STAINLESS STEEL HOSE

#### Applications



### VITALFLEX® - Monel



**Part No.:** SS0-M Tube and Braid / SS1-M Tube and Single Braid / SS2-M Tube and Double Braid

**Construction:** Annular / Close Pitch / Heavy Wall

**Tube Available:** 400 Monel

**Braid Available:** 400 Monel

**Size Available:** 1/4" - 3"

**Max Temp:** -276°C to 700°C

Low | Med | High

Flexibility

Cycle Life

Pressure Rating

Chemical Resistance

Wall Thickness

### Construction



**Applicable Standards:**

Corrugated Metal Hoses: ISO 10380:2012

AGA Approved: AS 4631:2005 (upon request)

Watermark Approved: WMTS 520:2016 (upon request)

Welding Compliant: AS 4041- Class 1 (upon request)

Seismic Rated: AS 1170:2007 (upon request)

Fire Protection Systems (upon request)

#### Temperature Correction Factor

-150	-100	-50	0	20	70	150	200	250	300	350	400	450
1.0	1.0	1.0	1.0	1.0	1.0	0.93	0.89	0.86	0.83	0.81	0.78	0.78

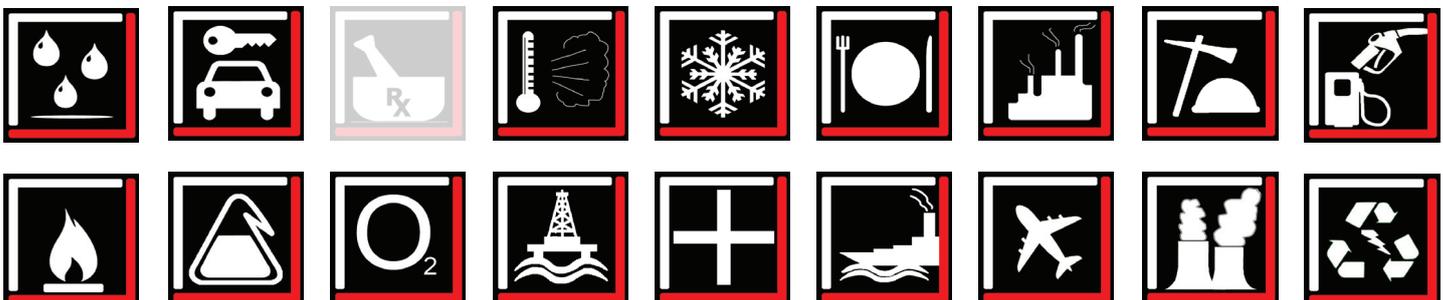
Nominal Dia.		Outside Dia. (mm)			Weight (Kg/m)			Min. Bend Radius (mm)		Working Pressure (kPa)			Burst Pressure (kPa)		
mm	inch	SS0	SS1	SS2	SS0	SS1	SS2	Static	Dynamic	SS0	SS1	SS2	SS0	SS1	SS2
3	1/4"	12.7	14.7	16.7	0.13	0.28	0.43	25.4	127	922	12975	20753	3688	51896	83033
12	1/2"	20.8	22.8	24.8	0.58	0.93	1.29	38.1	230.2	441	4833	7729	1644	19339	30909
20	3/4"	30.7	32.7	35.0	0.71	1.17	1.63	50.8	230.2	386	3736	5977	1544	14968	23917
25	1"	38.1	40.1	42.1	1.17	1.48	1.78	76.2	228.6	220	3199	5115	880	12803	20477
40	1 1/2"	55.6	57.6	59.6	1.24	1.90	2.55	101.6	304.8	110	2275	3640	440	9114	14561
50	2"	63.7	65.7	67.8	1.54	2.55	3.57	127	381	82	2178	3488	328	8728	13941
80	3"	96.0	98.5	101.0	1.80	3.03	4.26	228.6	558.8	55	1358	2164	220	5433	8673

\* Monel hoses are manufactured and tested and are suitable for dry chlorine service which meets The Chlorine Institute-Piping System for Dry Chlorine Standard - Pamphlet 6 Edition 15

### Alternative products:

Refer to Chlorine Transfer PTFE - Page 19

### Applications



### VITALFLEX® - Table 'E' M/S Fixed Flanges



**Part No.:** SSPC

**Construction:** Omega / Close Pitch

**Profile:** Medium Flexibility / Medium Pressure

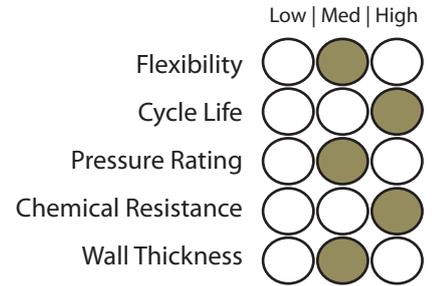
**Tube Available:** 304 / 316 Stainless Steel

**Braid Available:** 304 / 316 Stainless Steel

**Size Available:** 2" - 8"

(Larger sizes upon Request)

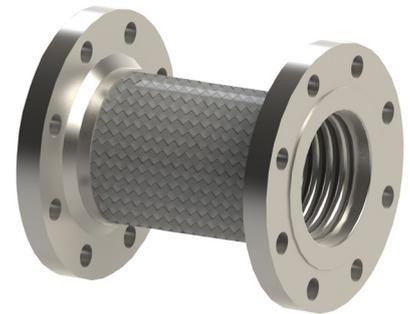
**Max Temp:** -276°C to 700°C



#### Construction

#### Vibration Eliminator / Pump Connector

Pump Connectors are flexible metal assemblies, primarily designed to isolate vibration from pumps on both the suction and discharge sides of the pump. They help to prevent damage caused by vibration, expansion and contraction. They accept thermal expansion and reduce piping stress due to minor misalignment. Constructed of stainless steel Omega corrugated metal and surrounded with a woven braid of high tensile stainless steel, these assemblies are flexible and are suitable to withstand high pressure and temperatures.



#### Applicable Standards:

Corrugated Metal Hoses: ISO 10380:2012

AGA Approved: AS 4631:2005 (upon request)

Watermark Approved: WMTS 520:2016 (upon request)

Welding Compliant: AS 4041- Class 1 (upon request)

Seismic Rated: AS 1170:2007 (upon request)

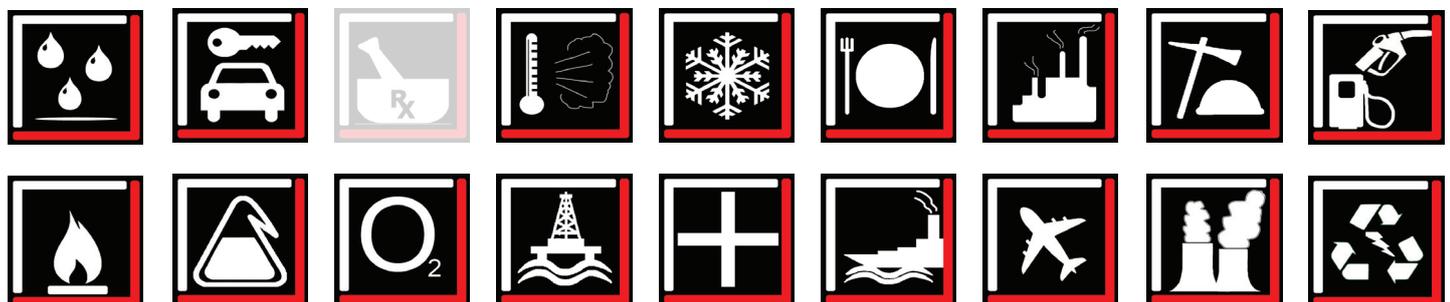
Fire Protection Systems (upon request)

#### Specifications

S/S Pump Connector – Table 'E' M/S Fixed Flanges				
Part Number	Size	Length	Working Pressure (kPa)	Burst Pressure (kPa)
SSPC-50	2"	150mm	2501	10004
SSPC-65	2 1/2"	150mm	2501	8004
SSPC-80	3"	150mm	2001	8004
SSPC-100	4"	150mm	1601	6406
SSPC-125	5"	150mm	1508	6032
SSPC-150	6"	150mm	1508	6032
SSPC-200	8"	200mm	1201	4804

Larger sizes & S/S flanges on request please contact Pacific Hoseflex for more information

#### Applications



### VITALFLEX® - BSPT 304 S/S Hex Fixed Males



**Part No.:** SSPC

**Construction:** Omega / Close Pitch

**Profile:** Medium Flexibility / Medium Pressure

**Tube Available:** 304 / 316 Stainless Steel

**Braid Available:** 304 / 316 Stainless Steel

**Size Available:** 3/4" - 2"

(Larger sizes upon Request)

**Max Temp:** -276°C to 700°C

	Low	Med	High
Flexibility	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Cycle Life	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Pressure Rating	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Chemical Resistance	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Wall Thickness	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

#### Construction

#### Vibration Eliminator / Pump Connector

Pump Connectors are flexible metal assemblies, primarily designed to isolate vibration from pumps on both the suction and discharge sides of the pump. They help to prevent damage caused by vibration, expansion and contraction. They accept thermal expansion and reduce piping stress due to minor misalignment. Constructed of stainless steel Omega corrugated metal and surrounded with a woven braid of high tensile stainless steel, these assemblies are flexible and are suitable to withstand high pressure and temperatures.



**Applicable Standards:**

Corrugated Metal Hoses: ISO 10380:2012

AGA Approved: AS 4631:2005 (upon request)

Watermark Approved: WMTS 520:2016 (upon request)

Welding Compliant: AS 4041- Class 1 (upon request)

Seismic Rated: AS 1170:2007 (upon request)

Fire Protection Systems (upon request)

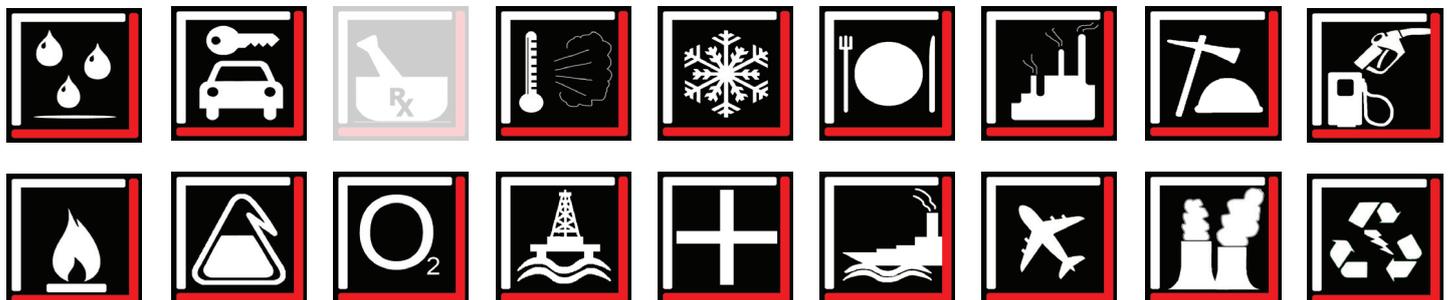
#### Specifications

S/S Pump Connector – BSPT 304 S/S Hex Fixed Males

Part Number	Size	Length	Working Pressure (kPa)	Burst Pressure (kPa)
SSPC-22643	3/4"	255mm	5003	200012
SSPC-22644	1"	255mm	4002	16008
SSPC-22645	1 1/4"	255mm	3502	14008
SSPC-22646	1 1/2"	305mm	3502	12008
SSPC-22647	2"	330mm	2501	10004

Larger sizes & M/S fittings on request please contact Pacific Hoseflex for more information

#### Applications



### VITALFLEX® - Bitumen Hose - Convoluted



**Construction:** Annular / Close Pitch  
**Profile:** Medium Flexibility / Medium Pressure  
**Tube Available:** 304 / 316 Stainless Steel  
**Cover Optional:** Fibreglass Sleeve, Rope Lag, Galvanised Armor Wire  
**Size Available:** 2 1/2"  
**Max Temp:** -276°C to 700°C

	Low	Med	High
Flexibility	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Cycle Life	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Pressure Rating	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Chemical Resistance	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Wall Thickness	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

#### Construction

##### Bitumen Hoses

- 2.5 to 3m – for most transfer in the field between sprayers and tankers
- 4 to 5m – for general storage facilities
- 6 to 7m for large storage facilities and areas in depots where access may be limited
- If a length excess of 7m is required, it is recommended that where possible, a combination of fixed pipe and a shorter length hose be used

##### Standards:

- ADG-7
- AS 2475-2001
- Corrugated Metal Hose: ISO 10380:2012
- AAPA HSEtE Guide No. 7



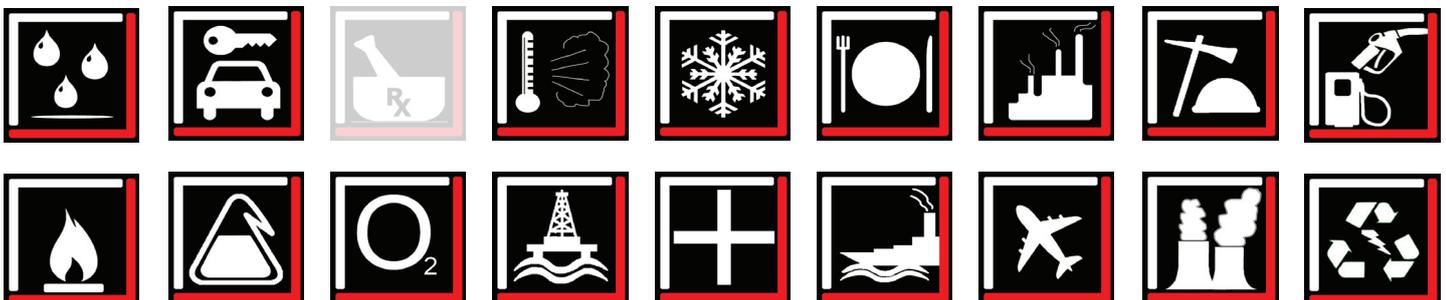
#### Specifications

Nominal Dia.		Outside Dia. (mm)			Weight (Kg/m)			Min. Bend Radius (mm)		Working Pressure (kPa)			Burst Pressure (kPa)		
mm	inch	SS0	SS1	SS2	SS0	SS1	SS2	Static	Dynamic	SS0	SS1	SS2	SS0	SS1	SS2
63	2 1/2"	79	82	85	1.41	2.70	3.99	280	650	294	2001	4002	294	8004	16008

#### Alternative products:

- Refer to Bitumen Fittings - Page 243
- Refer to Bitumen Code Hose - Page 168
- Refer to Spray Bar specification - Page 37

#### Applications

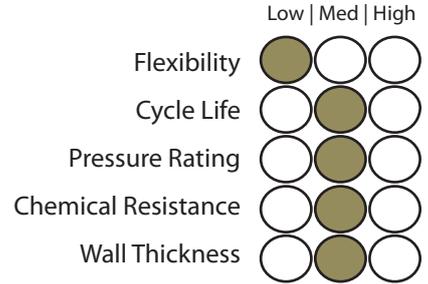


STAINLESS STEEL HOSE

### Bitumen Hose - Interlocked



**Construction:** Composite Silicone Packed  
**Profile:** Low Flexibility / Medium Pressure  
**Tube Available:** Galvanised Steel / AISI 304 Stainless Steel  
**Cover Optional:** Fibreglass Sleeve, Rope Lag, Galvanised Armor Wire  
**Size Available:** 2 1/2"  
**Max Temp:** -276°C to 700°C



#### Construction

##### Bitumen Hoses

- 2.5 to 3m – for most transfer in the field between sprayers and tankers
- 4 to 5m – for general storage facilities
- 6 to 7m for large storage facilities and areas in depots where access may be limited
- If a length excess of 7m is required, it is recommended that where possible, a combination of fixed pipe and a shorter length hose be used

##### Standards:

ADG-7  
 AS 2475-2001  
 AAPA HSEtE Guide No. 7



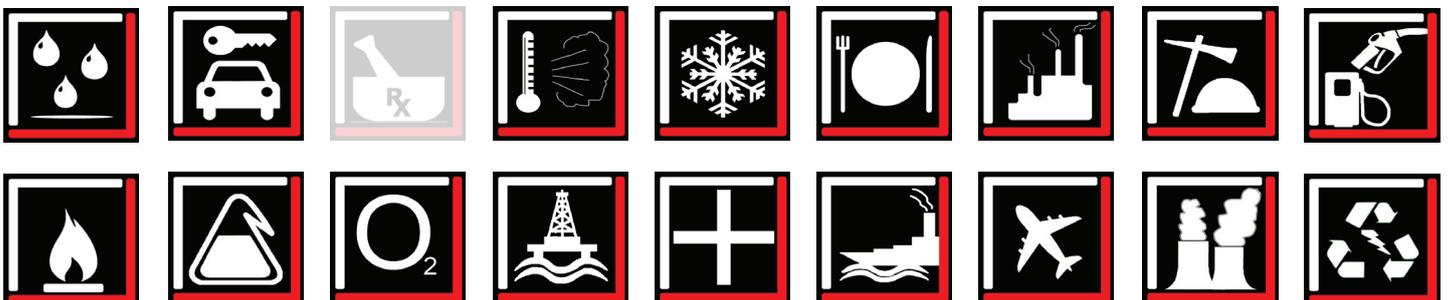
#### Specifications

Nominal Dia.		Outside Dia.	Working Pressure (kPa)		Static Bend Radius (mm)		Dynamic Bend Radius (mm)		Weight (Kg/m)	
mm	inch	mm	Galv.	Stainless	Galv.	Stainless	Galv.	Stainless	Galv.	Stainless
63	2 1/2"	71	1600	2400	325	430	485	485	4.24	4.24

#### Alternative products:

Refer to Bitumen Fittings - Page 243  
 Refer to Bitumen Code Hose - Page 168  
 Refer to Spray Bar specification - Page 37

#### Applications



### VITALFLEX® - TTMA Drop Hose



**Construction:** Omega / Close Pitch  
**Profile:** High Flexibility / Medium Pressure  
**Tube Available:** 304 / 316 Stainless Steel  
**Cover Optional:** Fibreglass Sleeve, Rope Lag, PVC, Galvanised Armor Wire  
**Size Available:** 3" - 4"  
(Larger sizes upon Request)  
**Max Temp:** -276°C to 700°C

	Low	Med	High
Flexibility	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Cycle Life	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Pressure Rating	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Chemical Resistance	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Wall Thickness	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

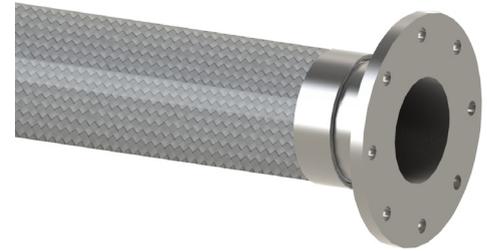
#### Construction

##### Drop Hose

Standard Lengths 1800mm and 2000mm flexible drop hose with 4" TTMA flanged ends forms an important part of the overhead bottom loading arm. Generally supplied in flexible corrugated stainless steel for longevity they can also be supplied to code hose specification.

##### Standards

- Corrugated Metal Hose: ISO 10380:2012
- AGA Approved: AS 4631:2005 (upon requirement)
- Welding Compliant: AS 4041- Class 1 (upon request)
- Seismic Rated: AS 1170:2007 (upon request)
- Fire Protection Systems (upon request)



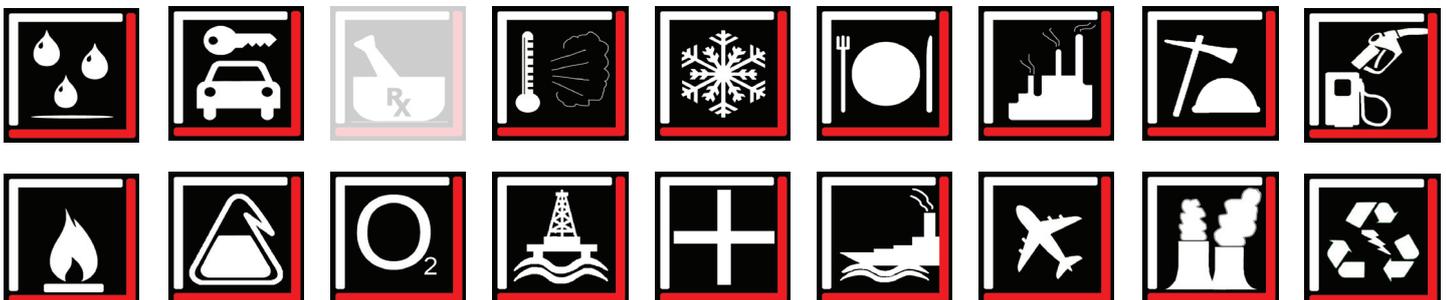
#### Specifications

Nominal Dia.		Outside Dia. (mm)			Weight (Kg/m)			Min. Bend Radius (mm)		Working Pressure (kPa)			Burst Pressure (kPa)		
mm	inch	SS0	SS1	SS2	SS0	SS1	SS2	Static	Dynamic	SS0	SS1	SS2	SS0	SS1	SS2
80	3"	97	100	103	1.62	3.12	4.62	350	800	294	2001	3202	294	8004	12808
100	4"	122	125	128	2.00	3.70	5.40	400	1000	294	1601	2501	294	6404	10004

#### Alternative products:

Refer to Fire Safe Code Hose - Page 170

#### Applications



### VITALFLEX® - Encapsulated PTFE lined

**Part No.:** SS1SCT

**Construction:** Smoothbore PTFE / Convuluted Metallic Hose

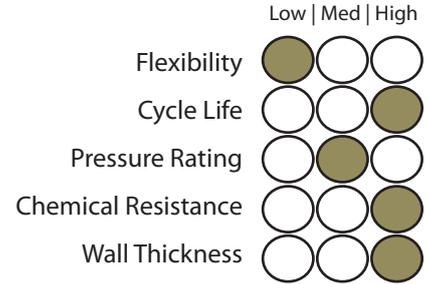
**Profile:** Low Flexibility / Low Pressure

**Tube Available:** PTFE Virgin / Anti-static Inner Tube

**Braid Available:** 304 / 316 Stainless Steel

**Size Available:** 1/2" - 6"

**Temperature:** -70°C to 260°C



#### Construction

**Use:**

The PTFE Smoothbore Liner is extruded within the metallic hose assembly and encapsulated over the flange or fitting, creating a total hygienic seal. The most hygienic PTFE on the market. Approved for food, chemical, cosmetic and pharmaceutical applications.

**Standards:**

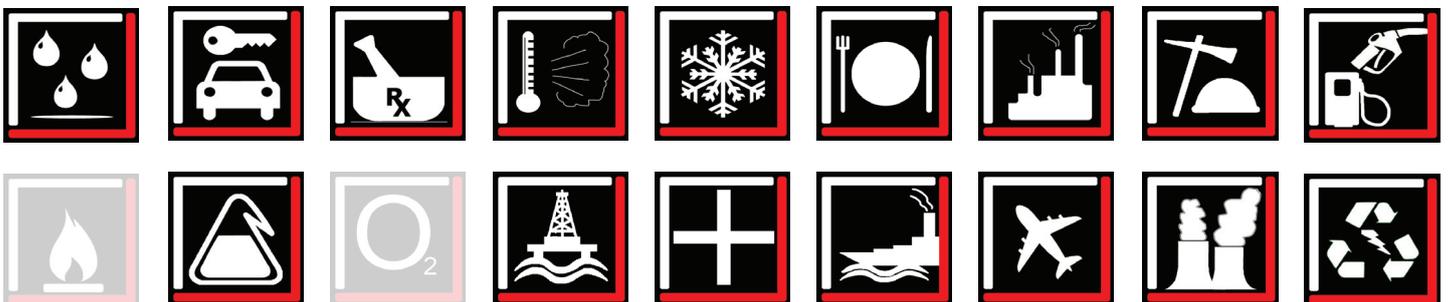
FDA Approved, Accepted by the U.S. Coast Guard, PTFE Perfluorocarbon Resins meets FDA 21 CFR 177.1550



#### Specifications

Part Number	Size	Outside Diameter	Min. Bend Radius	Working Pressure		Burst Pressure	
	inch	mm		kPa	bar	kPa	bar
SS1SCT-12	1/2"	18.00	LIMITED FLEXIBILITY	6500	65	30000	300
SS1SCT-20	3/4"	28.00		5000	50	20000	200
SS1SCT-25	1"	33.70		4400	44	17600	176
SS1SCT-32	1 1/4"	42.60		3500	35	14000	140
SS1SCT-40	1 1/2"	50.90		2800	28	11200	112
SS1SCT-50	2"	61.70		2000	20	8000	80
SS1SCT-65	2 1/2"	85.30		1800	18	7200	72
SS1SCT-80	3"	100.30		1800	18	7200	72
SS1SCT-100	4"	126.30		1600	16	6400	64
SS1SCT-125	5"	155.30		1400	14	5600	56
SS1SCT-150	6"	180.30		1200	12	4800	48

#### Applications



## Light Weight Engine Exhaust Interlock



**Part No.:** EEI4S

**Construction:** Unpacked

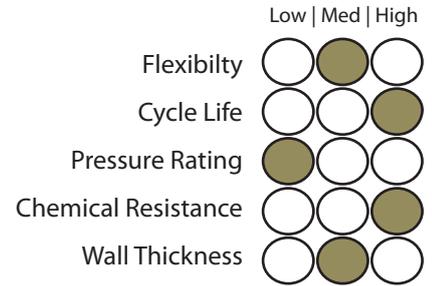
**Profile:** Medium Flexibility / Medium Pressure

**Tube Available:** 304 Stainless Steel

**Size Available:** 3/4" - 12"

(Larger sizes upon Request)

**Max Temp:** 700°C



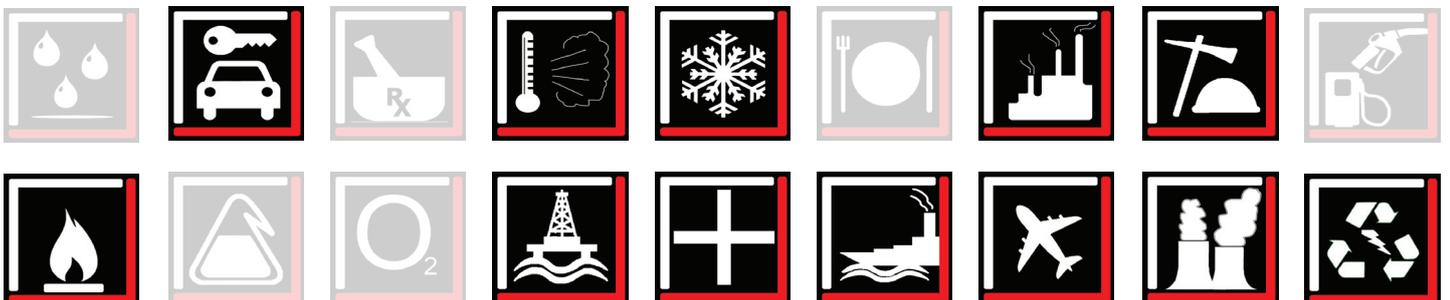
### Construction

Typical applications include commercial vehicle, passenger vehicle plus plant and portable generator set exhaust systems. This is a general purpose flexible metallic light weight conduit designed for a variety of installations requiring motion, vibration and bending.



Part Number	Size	I.D. (mm)	O.D. (mm)	Bend Radius (mm)
EEI4S-20	3/4"	19	22.0	140
EEI4S-25	1"	25	28.0	152
EEI4S-32	1 1/4"	32	36.0	160
EEI4S-38	1 1/2"	38	41.3	166
EEI4S-41	1 5/8"	41	44.3	180
EEI4S-45	1 3/4"	44	47.3	190
EEI4S-48	1 7/8"	48	51.3	195
EEI4S-50	2"	51	54.3	205
EEI4S-54	2 1/4"	57	60.3	235
EEI4S-63	2 1/2"	63	66.3	260
EEI4S-70	2 3/4"	70	73.3	285
EEI4S-80	3"	76	79.3	205
EEI4S-90	3 1/2"	90	94.2	250
EEI4S-100	4"	102	106.2	370
EEI4S-114	4 1/2"	114	118.2	490
EEI4S-125	5"	127	131.2	515
EEI4S-140	5 1/2"	140	144.2	600
EEI4S-150	6"	152	156.2	655
EEI4S-175	7"	178	183.0	740
EEI4S-200	8"	203	208.0	800
EEI4S-225	9"	230	234.0	950
EEI4S-250	10"	254	259.0	1100
EEI4S-300	12"	305	310.0	1400

### Applications



## Material Handling Lined Interlock



**Part No.:** MHI4S

**Construction:** Unpacked / Liner

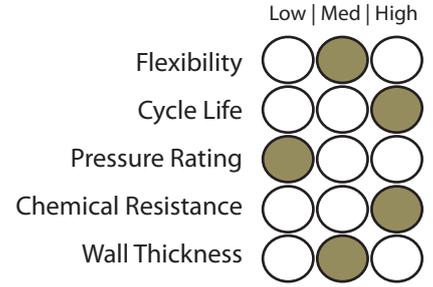
**Profile:** Medium Flexibility / Medium Pressure

**Tube Available:** 304 Stainless Steel

**Size Available:** 1 1/4' - 10"

(Larger sizes upon Request)

**Max Temp:** 700°C



### Construction

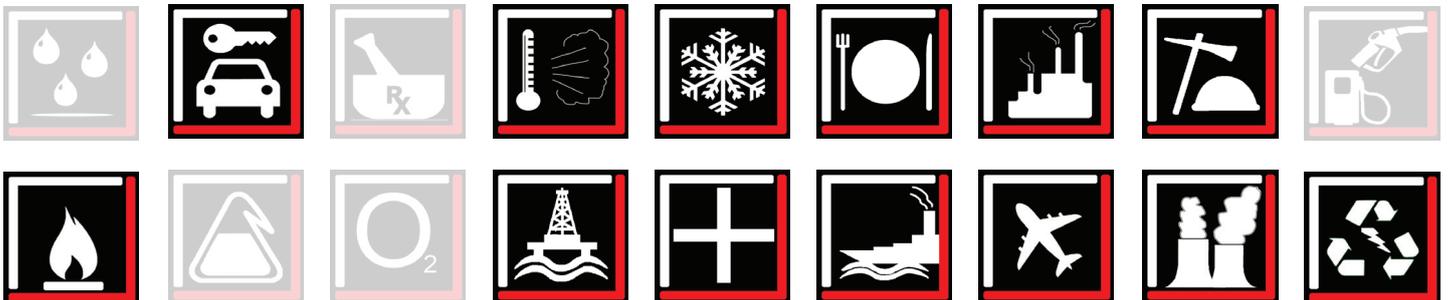
The interlock is specially wound into a double interlock hose from two separate metal strips. The double interlock hose is manufactured for the purpose of producing a liner to create a moderately smooth inner bore. The inner will provide a higher flow rate giving the hose a variety of advantages such as nil air loss from its tighter construction, elimination of materials degradation and contamination experienced with other hoses, as well as a longer service life due to greater abrasion resistance.

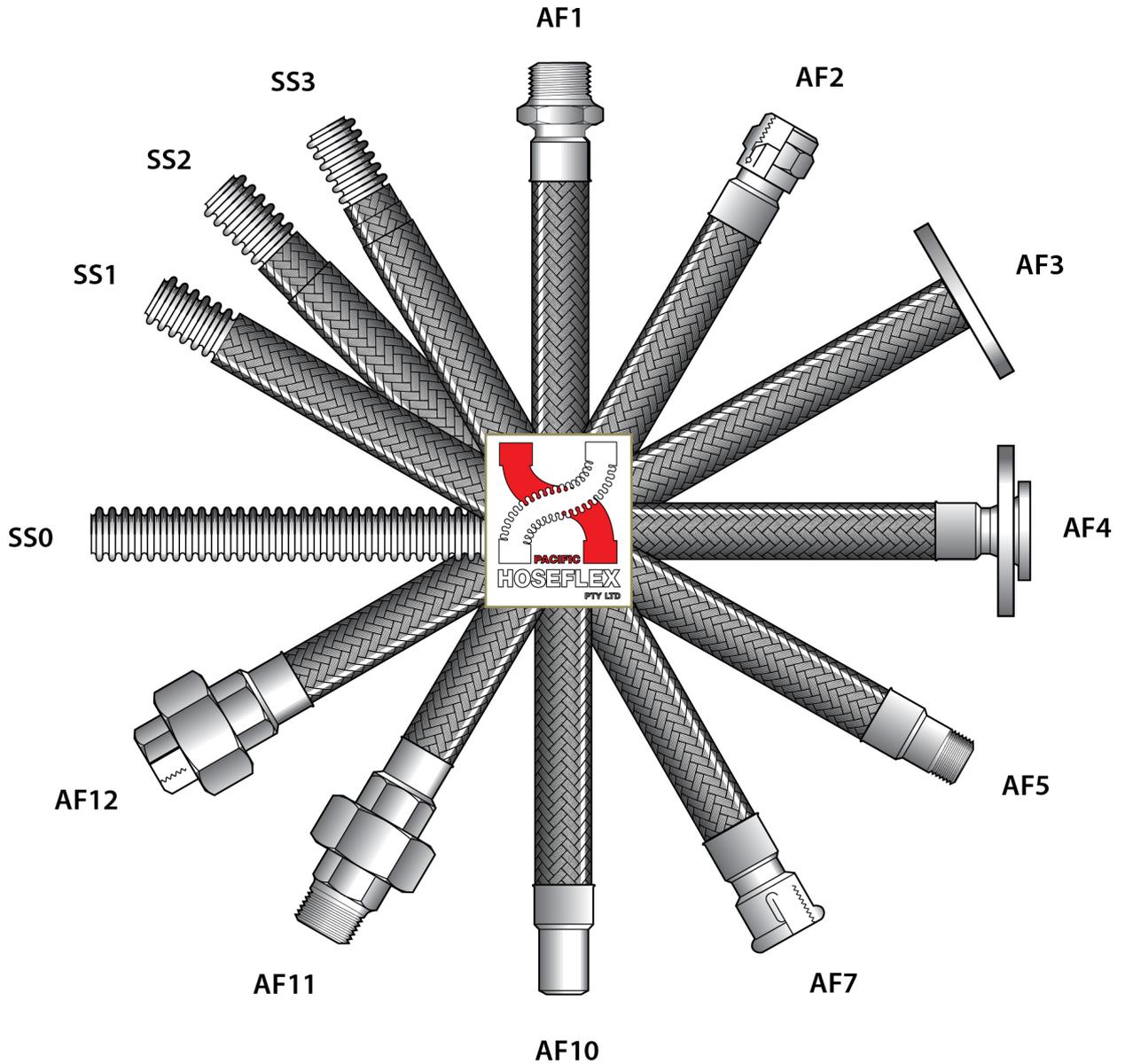


Applications may include large volume transfer of dry bulk materials, difficult to fluidize materials in industrial plants, ships, barges, silos, elevators, trucks and rail units. Uses include pneumatic transfer of bulk materials in powder, pellet, granules, flake or pebble form such as chemicals, feed, flour, grain, plastics, sugar, cement, pebble and lime.

Part Number	Size	I.D. (mm)	O.D. (mm)	Bend Radius (mm)
MHI4S-32	1 1/4"	32	36	203
MHI4S-40	1 1/2"	38	42	255
MHI4S-50	2"	51	55	355
MHI4S-54	2 1/4"	57	61	368
MHI4S-63	2 1/2"	63	67	381
MHI4S-80	3"	76	81	406
MHI4S-90	3 1/2"	95	100	432
MHI4S-100	4"	102	107	457
MHI4S-125	5"	127	132	559
MHI4S-150	6"	152	158	635
MHI4S-200	8"	200	210	900
MHI4S-250	10"	250	261	1200

### Applications





- AF1 - Fixed Hex Male
- AF2 - Swivel Female
- AF3 - Fixed Flange
- AF4 - Swivel Flange
- AF5 - Toe Nipple
- AF7 - Fixed Female Socket
- AF10 - Welded Pipe End
- AF11 - Male Union
- AF12 - Female Union

- SS0 - Convoluted hose
- SS1 - Convoluted hose + Single Braid
- SS2 - Convoluted hose + Double Braid
- SS3 - Convoluted hose + Triple Braid